



# CONSTRUCTION EQUIPMENT

## COLUMBIA FOREST PROD VOLVO L180H 4757 - DIESEL ENGINE



**Sample No:** VCP413636  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** COLUMBIA FOREST PROD



### SAMPLE INFORMATION

Sample Number	<b>VCP413636</b>	VCP417528	VCP399215	VCP345620
Sample Date	<b>28 Aug 2023</b>	27 Jun 2023	05 Jan 2023	03 Mar 2022
Machine Hours	<b>12476</b>	12328	11028	9000
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.0</b>	13.0	13.5	12.9
Base Number (BN)	mg KOH/g	<b>10.2</b>	10.5	9.1	10.1
Oxidation (PA)	%	<b>74</b>	82	84	77

### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



### CONTAMINATION

Soot %	%	<b>0.1</b>	0.3	0.5	0.2
Nitration (PA)	%	<b>43</b>	60	76	52
Sulfation (PA)	%	<b>59</b>	63	62	60
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>4</b>	7	7	5
Sodium	ppm	<b>2</b>	4	5	2
Potassium	ppm	<b>3</b>	2	0	0



### WEAR METALS

Iron	ppm	<b>2</b>	5	11	4
Copper	ppm	<b>&lt;1</b>	1	2	<1
Lead	ppm	<b>1</b>	<1	<1	<1
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>1</b>	0	3	1
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>32</b>	43	42	38
Nickel	ppm	<b>0</b>	<1	0	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1417</b>	1728	1748	1600
Magnesium	ppm	<b>411</b>	510	510	507
Zinc	ppm	<b>959</b>	1135	1135	1066
Phosphorus	ppm	<b>768</b>	923	926	925
Barium	ppm	<b>0</b>	<1	0	0
Boron	ppm	<b>49</b>	44	23	51

**Depot:** VOLVO1672  
**Unique No:** 10622172  
**Signed:** Wes Davis  
**Report Date:** 29 Aug 2023



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## GRAPHS

